



DOCKET NO: 2002P87049WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Fufang Zha et al.  
Serial No: 10/774,041  
Confirmation No: 4995  
Filed: February 6, 2004  
For: METHOD OF CLEANING MEMBRANE MODULES

Examiner: Menon, Krishnan S.  
Art Unit: 1723

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**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)**

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 17th day of July, 2006.

  
Rose Daniels

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**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT FILED PURSUANT TO THE DUTY OF  
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

**PART I: Compliance with 37 C.F.R. §1.97**

This Information Disclosure Statement has been filed more than three months after the filing date of this application and after the mailing date of the first Office Action, but before the mailing date of either a final action under 37 C.F.R. §1.113 or a Notice of Allowance under 37 C.F.R. §1.311, or an action that otherwise closes prosecution in this application.

The fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) is enclosed.

07/20/2006 GWORDOF1 00000052 10774041

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180.00 DP

PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicant hereby makes the following additional information of record in the above-identified application.

The applicant would like to bring to the Examiner's attention the following other information, whose relevance is discussed in Part III below:

PART III: Explanation of Non-English Language References and Remarks Concerning Other Information Cited

The following is a concise explanation of the relevance of each non-English language reference listed on the attached form PTO-1449 (modified):

DE 3904544 appears to be directed to polymer membranes on the basis of polyvinylidene fluoride, a process for the production thereof and their use.

DE 4117281 appears to be directed to hydrophylized microporous polytetrafluorethylene membrane and production process thereof.

DE 4117422 appears to be directed to monitoring contamination level of filter, partic. For hydraulic fluids – in which signal is produced which correlates with quotient of two pressure differences and evaluating device produces signal to change filter when quotient reaches given value.

EP 250337 appears to be directed to a semi-permeable hydrophilic polyvinylidene fluoride membranes suited for drying.

EP 327025 appears to be directed to a porous membrane filter having fluid impermeable places and their use.

EP 407900 appears to be directed to a flat or capillary membrane manufactured from a mixture of polyvinylidene fluoride and a second by chemical reaction hydrophilable polymer.

EP 463627 appears to be directed to a hydrophylized microporous polytetrafluorethylene membrane and production process thereof.

FR 2620712 appears to be directed to hydrophilic block copolymers of vinylidene fluoride and of N-alkylacrylamides and process for their production.

FR 2674448 appears to be directed to a process for cleaning mesoporous tubular ultrafiltration membranes fitted as a bundle in a housing.

JP 01-307409 appears to be directed to a device for automatically detecting leak in hollow yarn ultrafiltration membrane module and giving alarm.

JP 02-164423 appears to be directed to a method for washing hollow fiber membrane filter.

JP 02-284035 appears to be directed to a leak test method for hydrophobic hollow yarn type porous membrane.

JP 03-018373 appears to be directed to a method and device for detecting leak of hollow fiber membrane type liquid processor.

JP 03-028797 appears to be directed to method for removing suspensible impurity of condensate by mixed end type condensate desalting device.

JP 03-110445 appears to be directed to a completeness testing method.

JP 04-310223 appears to be directed to a polyfluorovinylidene resin membrane and method for production thereof.

JP 05-023557 appears to be directed to a hydrophilic heat-resistant film and its manufacture.

JP 05-157654 appears to be directed to a leakage inspection method of film-separation device.

JP 06-277469 appears to be directed to a membrane separation device.

JP 06-071120 appears to be directed to a method for detecting blinding of filter.

JP 06-114240 appears to be directed to a filter.

JP 07-000770 appears to be directed to a hollow-fiber membrane filter and its cleaning method.

JP 07-275665 appears to be directed to a hollow-yarn membrane module.

JP 08-010585 appears to be directed to a condensation device using hollow yarn membrane.

JP 09-141063 appears to be directed to a hollow fiber membrane module.

JP 10-156149 appears to be directed to a hollow-fiber membrane module.

JP 11-319507 appears to be directed to a hollow fiber membrane module.

JP 02-144132 appears to be directed to a porous polyolefin film.

JP 58-088007 appears to be directed to a separation of liquid mixture.

JP 61-097006 appears to be directed to a repairing method of hollow yarn type module.

JP 61-107905 appears to be directed to a filter.

JP 61-257203 appears to be directed to a hydrophilic porous membrane and its preparation.

JP 61-263605 appears to be directed to a hollow yarn membrane device.

JP 62-004408 appears to be directed to a filtration device using hollow yarn membrane.

JP 62-114609 appears to be directed to a hollow yarn membrane filter.

JP 62-140607 appears to be directed to a method for sterilely detecting leak of hollow yarn-type module.

JP 62-179540 appears to be directed to a nonadsorptive hydrophilic membrane.

JP 63-097634 appears to be directed to a hydrophilic membrane and its production.

WO 93/15827 appears to be directed to a hollow yarn membrane module. An English Abstract is enclosed.

JP 63-143905 appears to be directed to a hollow yarn membrane filter. An English translation is enclosed.

JP 06-343837 appears to be directed to a hollow fiber membrane module. An English translation is enclosed.

JP 07-024272 appears to be directed to a filtering method. An English translation is enclosed.

JP S63-38884 appears to be directed to a hollow fiber module. An English translation is enclosed.

JP 07-185268 appears to be directed to a hollow fiber filter membrane element and module. An English translation is enclosed.

JP 62-250908 appears to be directed to a hollow yarn type filter. An English Abstract is enclosed.

JP 04-265128 appears to be directed to membrane separation equipment. An uncertified English translation is enclosed.

JP 07-185271 appears to be directed to an immersion membrane apparatus. An uncertified English translation is enclosed.

JP 04-250898 appears to be directed to a batch-wise waste water treating device. An English translation is enclosed.

JP 06-285496 appears to be directed to a hollow fiber membrane separation biological treatment and device for organic drainage. An English Abstract is enclosed.

JP 05-285348 appears to be directed to a vertical type hollow fiber membrane module. An English Abstract is enclosed.

JP 05-096136 appears to be directed to a hollow-fiber membrane module and using method therefor. An English Abstract is enclosed.

JP 06-218237 appears to be directed to a dipping type filtering device. An English Abstract is enclosed.

JP 07-155758 appears to be directed to a waste water treating device. An English Abstract is enclosed.

JP 09-220569 appears to be directed to a solid-liquid separator. An English Abstract is enclosed.

JP 11-165200 appears to be directed to a method for treating sludge. An English Abstract is enclosed.

The following are remarks concerning the other information cited:

#### PART IV: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

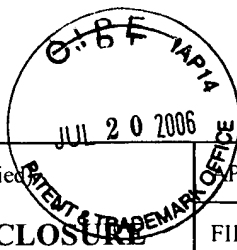
An early and favorable action is hereby requested.

Respectfully submitted,  
*Fufang Zha et al., Applicants*

By: 

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Date: July 17, 2006



FORM PTO-1449/A and B (Modified)		APPLICATION NO.: 10/774,041	ATTY. DOCKET NO.: 2002P87049WOUS
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		FILING DATE: 02/06/04	CONFIRMATION NO.: 4995
		APPLICANT: Fufang Zha et al.	
		GROUP ART UNIT: 1723	EXAMINER: Menon, Krishnan S.
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#### U.S. PATENT DOCUMENTS

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document MM-DD-YYYY
		Number	Kind Code		
		*5,958,243		Lawrence et al.	09-28-1999
		*6,045,698		Cote et al.	04-04-2000
		*6,214,231		Cote et al.	04-10-2001
		*6,284,135		Ookata	09-04-2001
		*6,325,928		Pedersen et al.	12-04-2001
		*6,375,848		Cote et al.	04-23-2002

#### FOREIGN PATENT DOCUMENTS

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
	*	DE	3904544	A	Fraunhofer-Gesellschaft zur Foerderung	08-16-1990	Abstract
	*	DE	4117281	A	Chemie AG Bitterfeld-Wolfen	01-02-1992	Abstract
	*	DE	4117422	A	Dettinger, Willi	11-12-1992	Abstract
	*	EP	1052012	A1	Asahi Kasei Kogyo Kabushiki Kaisha	11-15-1990	
	*	EP	1350555	A1	Toray Industries, Inc.	10-08-2003	
	*	EP	250337	A1	Rhone-Poulenc Recherches	12-23-1987	Abstract
	*	EP	327025	A	Sartorius GmbH	08-09-1989	Abstract
	*	EP	395133	A1	X-Flow B.V.	02-01-1995	
	*	EP	407900	A2	Akzo N.V.	01-16-1991	Abstract
	*	EP	430082	A2	Millipore Corporation	06-19-1996	
	*	EP	463627	A	Chemie AG Bitterfeld-Wolfen	01-02-1992	Abstract
	*	EP	50447	A	Asahi Glass Company Ltd.	10-02-1985	
	*	EP	763758	A1	Koh Giken Co., Ltd.	10-02-1996	
	*	EP	911073	A1	Pall Corporation	04-28-1999	
	*	EP	920904	A1	Praxair Technology, Inc.	06-09-1999	
	*	FR	2620712	A1	Pennwalt Corp.	03-24-1989	Abstract
	*	FR	2674448	A1	Dumez Lyonnaise Eaux	02-10-1992	Abstract
	*	GB	2253572	A	Aljac Engineering Limited	09-16-1992	
	*	JP	01-307409	A2	Daicel Chem Ind. Ltd.	12-12-1989	Abstract
	*	JP	02-164423	A2	Toshiba Corp.	06-25-1990	Abstract
	*	JP	02-284035	A2	Toyobo Co Ltd.	11-21-1990	Abstract
	*	JP	03-018373	A2	Terumo Corp.	01-25-1991	Abstract
	*	JP	03-028797	A2	Ebara Corp.	02-06-1991	Abstract
	*	JP	03-110445	A2	Fuji Photo Film Co Ltd	05-10-1991	Abstract
	*	JP	04-310223	A2	Asahi Chem Ind Co Ltd.	11-02-1992	Abstract
	*	JP	05-023557	A2	Asahi Chem Ind Co Ltd	02-02-1993	Abstract

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				APPLICANT: Fufang Zha et al.					
				GROUP ART UNIT: 1723		EXAMINER: Menon, Krishnan S.			
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**FOREIGN PATENT DOCUMENTS**

	*	JP	05-157654	A2	Asahi Chem Ind Co Ltd	06-25-1993	Abstract
	*	JP	06-277469	A	Kurita Water Ind. Ltd.	10-04-1994	Abstract
	*	JP	06-071120	A2	Akai Electric Co Ltd	03-15-1994	Abstract
	*	JP	06-114240	A2	Toray Ind Inc	04-26-1994	Abstract
	*	JP	07-000770	A2	Toshiba Corp.	01-06-1995	Abstract
	*	JP	07-275665	A2	Mitsubishi Rayon Co Ltd	10-24-1995	Abstract
	*	JP	08-010585	A2	Ishigaki Mech Ind Co	01-16-1996	Abstract
	*	JP	09-141063	A2	Mitsubishi Rayon Co Ltd	06-03-1997	Abstract
	*	JP	10-156149	A2	Nok Corp	06-16-1998	Abstract
	*	JP	11-319507	A	Toray Ind. Inc.	11-24-1999	Abstract
	*	JP	02-144132	A2	Mitsubishi Rayon Co Ltd	06-01-1990	Abstract
	*	JP	58-088007	A2	Asahi Glass Co Ltd	05-26-1983	Abstract
	*	JP	61-097006	A2	Daicel Chem Ind Ltd	05-15-1986	Abstract
	*	JP	61-107905	A2	Toshiba Corp.	05-26-1986	Abstract
	*	JP	61-257203	A2	Terumo Corp.	11-14-1986	Abstract
	*	JP	61-263605	A2	Toshiba Corp.	11-21-1986	Abstract
	*	JP	62-004408	A2	Toshiba Corp.	01-10-1987	Abstract
	*	JP	62-114609	A2	Ebara Corp.	05-26-1987	Abstract
	*	JP	62-140607	A2	Daicel Chem Ind Ltd.	06-24-1987	Abstract
	*	JP	62-179540	A2	Asahi Chem Ind Co Ltd	08-06-1987	Abstract
	*	JP	63-097634	A2	Toray Ind Inc	04-28-1988	Abstract
	*	WO	90/00434		Fairey Arlon Limited	01-25-1990	
	*	WO	96/41676		United Utilities plc	12-27-1996	
	*	WO	99/01207		Zenon Environmental Inc.	01-14-1999	
	*	WO	99/59707		USF Filtration and Separations Group Inc	11-25-1999	
		WO	93/02779	A1	Memtec Limited	02-18-1993	
		WO	93/15827		Yamamori	08-19-1993	Abstract
		JP	63-143905	A2	Toshiba Corp.	06-16-1988	Y
		JP	06-343837		Ebara Infilco Co. Ltd.	12-20-1994	Y
		JP	07-024272		Mitsubishi Rayon Co. Ltd.	01-27-1995	Y
		JP	S63-38884		Asahi Chemical Industry Co. Ltd.	07-05-1986	Y
		JP	07-185268		Toray Ind. Inc.	07-25-1995	Y
		JP	62-250908		Asahi Chemical Industry Co. Ltd.	10-31-1987	Abstract
		JP	04-265128		Ebara Infilco Co. Ltd.	09-21-1992	Y
		JP	07-185271		Kurita Water Industries Ind. Ltd.	07-25-1995	Y
		JP	04-250898		Yanmar Diesel	09-07-1992	Y
		JP	06-285496		Ebara Infilco Co. Ltd.	10-11-1994	Abstract
		JP	05-285348		Nitto Denko Corp.	11-02-1993	Abstract



<b>FORM PTO-1449/A and B (Modified)</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				APPLICATION NO.: 10/774,041		ATTY. DOCKET NO.: 2002P87049WOUS			
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#### FOREIGN PATENT DOCUMENTS

		JP	05-096136		Toray Ind. Inc.	04-20-1993	Abstract
		JP	06-218237		Kubota Corp.	08-09-1994	Abstract
		JP	07-155758		Mitsubishi Rayon Co. Ltd.	06-20-1995	Abstract
		JP	09-220569		Kubota Corp.	08-26-1997	Abstract
		JP	11-165200		Mitsubishi Rayon Co. Ltd.	06-22-1999	Abstract
		EP	1034835		Biothane Systems International	09-13-2000	

#### OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)	
		KAIYA et al., "Water Purification Using Hollow Fiber Microfiltration Membranes," 6 <sup>th</sup> World Filtration Congress, Nagoya, 1993, pp. 813-816.		
		UEDA et al., "Effects of Aeration on Suction Pressure in a Submerged Membrane Bioreactor," <i>Wat. Res.</i> Vol. 31, No. 3, 1997, pp. 489-494.		
		LOZIER et al., "Demonstration Testing of ZenoGem and Reverse Osmosis for Indirect Potable Reuse Final Technical Report," published by CH2M Hill, available from the National Technical Information Service, Operations Division, January 2000, entire publication.		
		ZENON, "Proposal for ZeeWeed® Membrane Filtration Equipment System for the City of Westminster, Colorado, Proposal Number 479-99," March 2000, entire publication.		
		JOHNSON, "Recent Advances in Microfiltration for Drinking Water Treatment."		

EXAMINER	DATE CONSIDERED
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#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*a copy of this reference is not provided because it was previously cited in an Information Disclosure Statement dated 1/7/2005 and a copy was placed in the application file.